

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) Method for the testing of substrates (1) provided with a predetermined pattern, comprising

~~in which optically defining~~ an actual pattern (1a), applied to a substrate (1) by means of a printing or structuring process (3, 4), ~~is optically detected~~ (6),

comparing the optically detected actual pattern (1a) ~~is compared~~ (8) with a desired pattern,

in dependence upon the comparison (8) and taking into account permissible tolerances, ~~it is determined~~ determining to which a further process to which the observed substrate (1) provided with the actual pattern (1a) is to be delivered,

characterized

~~in that effecting~~ the optical detection (8) of the actual pattern (1a) ~~is effected~~ in the form of digital data ~~with the formation of~~ and forming an actual data set (7),

~~in that~~ formatting a desired data set ~~is formatted~~ (2) from control data for the application of the pattern onto the substrates, and

~~in that~~ carrying out data processing ~~is carried out to the effect that~~ by comparing the desired data set and the actual data set ~~are compared~~ (8) datawise with one another taking into account permissible tolerances.

2. (Currently Amended) Method according to claim 1,

characterized

~~in that the application of~~ comprising applying the pattern onto the substrates (1) ~~is effected~~ by means of a process employing a correspondingly constituted template, and

~~in that~~ formatting the desired data set is ~~formatted~~ (2) from the control data (4) employed for producing the template.

3. (Currently Amended) Method according to claim 1 ~~or~~ 2,
~~characterized in that, comprising~~
~~testing~~ selected sections (1a₁, 1a₂, 1a₃, 1a₄) of the desired pattern ~~are subjected to the~~
~~testing~~ (8).

4. (Currently Amended) Method according to ~~any of claims~~ claim 1 to 3,
~~characterized in that, comprising associating~~
different tolerance data subsets ~~are associated~~ with various sections (1a₁, 1a₂, 1a₃, 1a₄) of the desired pattern.

5. (Currently Amended) Method according to ~~any of claims~~ claim 1 to 4,
~~characterized in that, comprising carrying out~~
~~data processing~~ (5) ~~can be carried out to the effect that there is effected an~~ by editing
of the respective data sets with regard to the sections to be compared (1a₁, 1a₂, 1a₃, 1a₄)
~~and/or the associated tolerances.~~

6. (Currently Amended) Method according to ~~any of claims~~ claim 1 to 5,
~~characterized in that, comprising effecting~~
the optical detection (6) ~~is effected~~ pixel-wise by means of a digital camera.

7. (Currently Amended) Method according to claim 6,
~~characterized in that,~~
~~for the optical detection (6) there is effected a comprising effecting~~ relative movement between the digital camera and the substrate carrying the actual pattern for optical detection.

8. (Currently Amended) Method according to claim 7,
~~characterized in that, wherein~~
the digital camera is a linear camera one pixel wide, the length of which corresponds to one linear dimension of the region of the actual pattern on the substrate to be tested, and comprising effecting the relative movement is effected with a step size of one pixel perpendicularly to the one linear dimension.

9. (Currently Amended) Method according to claim 8,
~~characterized in that, wherein~~
the linear camera is formed by means of comprises linear sub-cameras arranged in a staggered manner.

10. (Currently Amended) Method according to ~~any of claims~~ claim 1 to 9,
~~characterized in that, wherein~~
the substrate (1), on which the actual pattern (1a) to be tested is applied, itself already carries at least one other pattern, and comprising constituting or carrying out the optical detection ~~is so constituted or so carried out so~~ that it discriminates the actual pattern to be tested with respect to the other pattern and the substrate.

11. (Currently Amended) Arrangement for the testing of substrates (1) provided with a predetermined pattern having, comprising
an opto-electronic arrangement (6) for the detection of detecting an actual pattern (1a) applied to the substrate (1) by means of a printing or structuring process (3, 4),
a comparator (8) which compares for comparing the optically detected actual pattern (1a) with a desired pattern and in dependence upon the comparison and taking into account permissible tolerances determines to which determining a further process to which the observed substrate (1) provided with the actual pattern (1a) is to be delivered,
characterized
in that a converter (7) converts for converting the pattern detected by the opto-electronic arrangement (6) into an actual data set in the form of digital data, and
in that a formatting means (2) formats formatter to format a desired data set from control data for the application of the pattern onto the substrates (3, 4), wherein
in that the comparator (8) carries out data processing to the effect that carrying out the desired data set and the actual data set are compared datawise with one another taking into account permissible tolerances.

12. (Currently Amended) Arrangement according to claim 11,
characterized
in that the application of a correspondingly constituted template for applying the pattern onto the substrates (1) is effected by means of a process employing a correspondingly constituted template (4), and
in that the formatting means (2) formats the desired data set from the control data employed for the production of the template.

13. - 15. (Canceled)

16. (Currently Amended) Arrangement according to any of claims claim 11 to 15,
~~characterized in that, comprising a digital camera for effecting~~
~~the optical detection (6) is effected pixel-wise by means of a digital camera.~~

17. (Currently Amended) Arrangement according to claim 16,
~~characterized in that,~~
~~for the optical detection there is effected a relative movement between wherein~~ the
~~digital camera (6) and can move relative to the substrate carrying the actual pattern for optical~~
~~detection.~~

18. (Currently Amended) Arrangement according to claim 17,
~~characterized in that, wherein~~
the digital camera (6) is a linear camera one pixel wide, the length of which
corresponds to one linear dimension of the region of the actual pattern on the substrate to be
tested, and the relative movement is can be effected with a step size of one pixel
perpendicularly to the one linear dimension.

19. (Currently Amended) Arrangement according to claim 18,
~~characterized in that, wherein~~
the linear camera is ~~formed by means of~~ comprising linear sub-cameras arranged in a
staggered manner.

20. (Currently Amended) Arrangement according to ~~any of claims~~ claim 11 to 19, characterized in that, wherein

the substrate (1), on which the actual pattern (1a) to be tested is applied, itself already carries at least one other pattern and the optical detection ~~is~~ can be so constituted or so carried out that it discriminates the actual pattern (1a) to be tested with respect to the other pattern and the substrate.

21. (Currently Amended) Application of the method Method according to ~~any of claims~~ claim 2 to 10, ~~or use of the arrangement according to any of claims~~ 12 to 20 for the comprising testing of the template for faults arising in the course of use.

22. (New) Method according to claim 4, comprising carrying out data processing by editing the respective data sets with regard to the associated tolerances.